

Meeting: 1003, Atlanta, Georgia, MAA CP B1, MAA Session on My Favorite Demo: Innovative Strategies for Mathematics Instructors, I

1003-B1-318 **David Betounes** and **Mylan Redfern*** (mredfern@valdosta.edu), Department of Mathematics & Computer Science, Valdosta State University, Valdosta, GA 31602. *Computational Calculus: An Electronic Text*. Preliminary report.

We will present two examples from an electronic calculus book that we have developed for Calculus I-II (with Calculus II- IV partially completed) and used in our classes. These examples demonstrate both our approach to the electronic environment and our teaching philosophy.

The electronic text addresses the challenge of integrating computational activities into the calculus sequence without sacrificing traditional content and skill development. It blends the reading and problem-working environments into one convenient unit that will provide a stimulating, computationally oriented, learning experience for students. The book provides a unified, interactive, and exciting environment for learning calculus and understanding the importance of numerical computation and approximation.

We have chosen two examples to present that particularly highlight these major themes as well as show the usability of the book. This demonstration will be done from within the electronic text as the student would encounter them or as an instructor would demonstrate in class.

Our book will be available in Maple, Mathematica, MathCad, and HTML-Java Applets formats, as well as a textbook-quality printed format. (Received September 09, 2004)